Successful Methods

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A Monthly Pictorial of Field Practice and Equipment

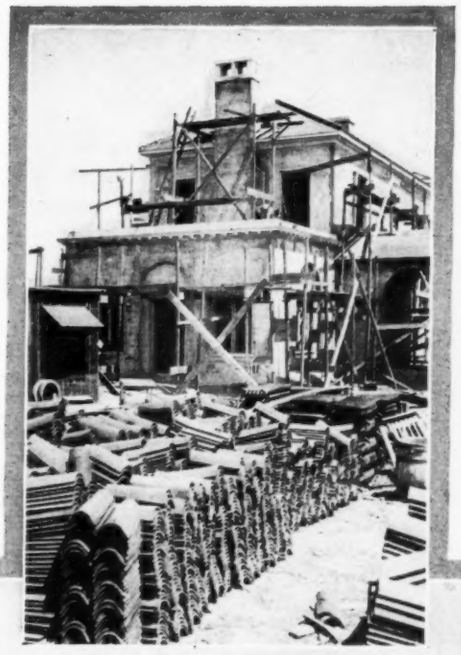
GENERAL CONSTRUCTION — HIGHWAYS — BUILDINGS
ENGINEERING — INDUSTRIAL

WILLIAM JABINE
Editor

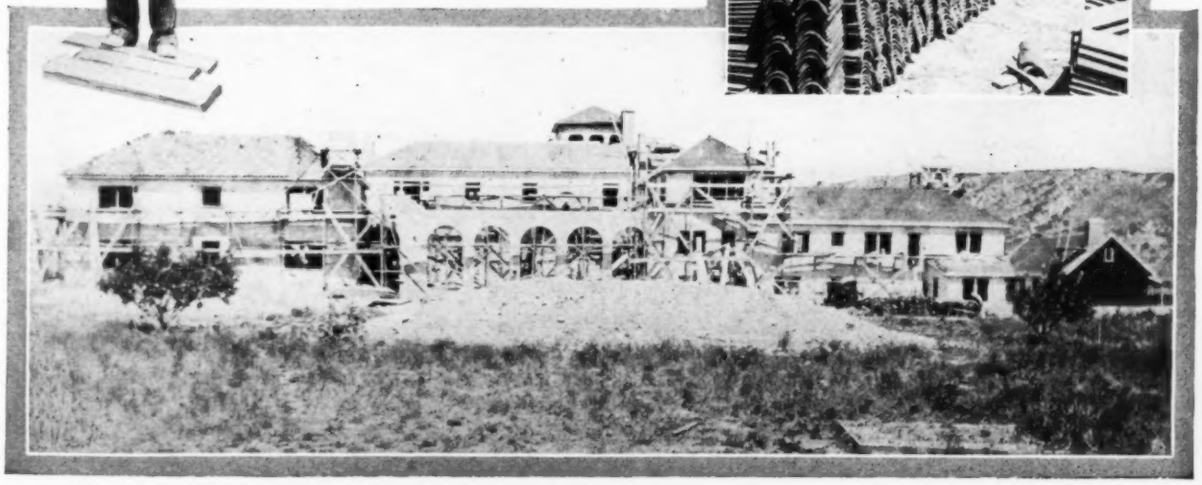
VOLUME 8 | NEW YORK, SEPTEMBER, 1926 | NUMBER 9

Picture Prize Goes to New Mexico

OUR prize money goes this month to Thomas E. Chenoweth of Kansas City, for the photographs which are reproduced on this page. Mr. Chenoweth is working as timekeeper for the Long Construction Company of Kansas City, which is building a ranch house for Mr. and Mrs. Waite Phillips at Cimarron, N. M. The building shown in the photographs is the ranch house. This house will be known as Villa Phillmont and is on a ranch 174,000 acres in area. As may be seen from the photographs, it will be one of the most notable residences in the entire southwest. A separate house for guests connected with the main house by cloistered walks is being constructed. A large swimming pool is included in the plans, and water is being brought from a stream in the mountains five miles away. Work began in February of this year and it is expected that the job will be finished by Thanksgiving.



Another $25.00 prize will be awarded for the best photograph sent in for the October issue. Read the conditions on page 15.



Keeping In Touch

© Keystone

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Above—A new machine made in France used for breaking up roads which are to be rebuilt.

At the left—Glasgow is to have a new bridge called the Oswald Bridge which will cross the Clyde and connect Oswald street and Commerce street. The photograph shows the bridge under construction.

Below—This ornate building is only a warehouse, despite its resemblance to a palace. It is in Los Angeles.

© Herbert

With Construction

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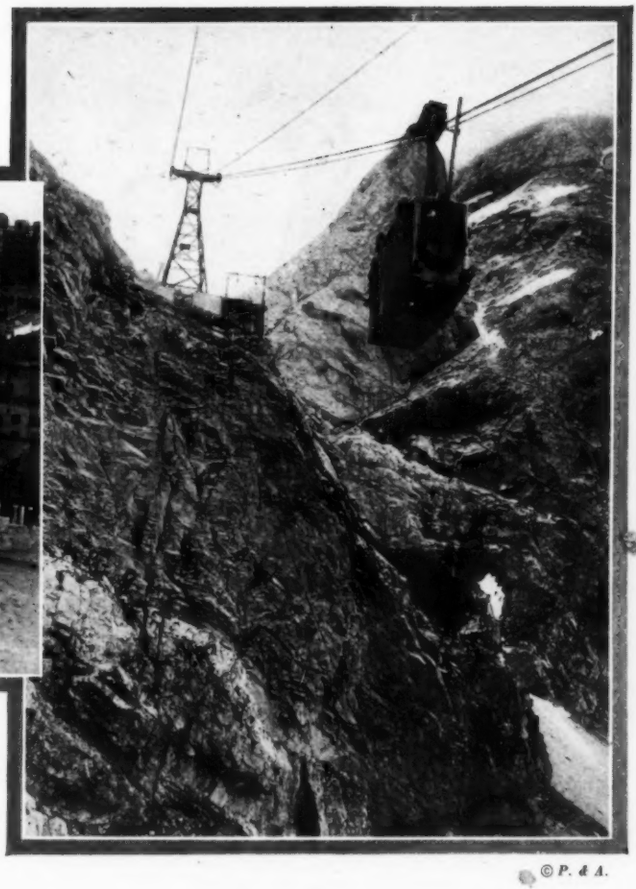
Above—The girls of the Los Angeles Y.W.C.A. pouring the concrete on the roof of their new hotel.



© P. & A.

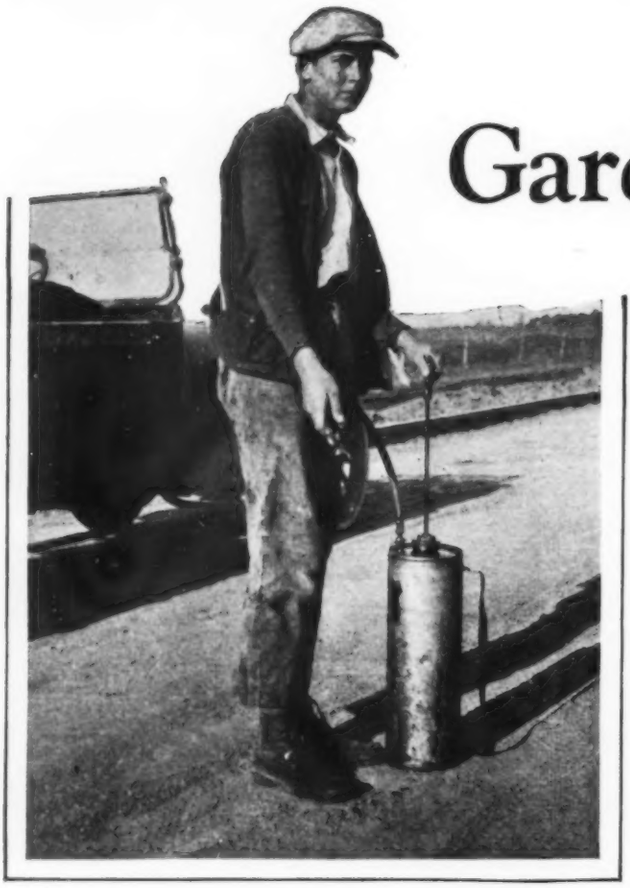
At the right—The first car, decorated with wreaths, passes over the aërial railway which ascends the Zugspitze in Germany.

Below—York, Pennsylvania, is building a new high school to cost more than $1,000,000. This photograph shows the building as it looked a week or two ago.

Garden Tools Make

Texas Contractor Puts Everyday Implements to Work on Concrete Highway Construction

By J. L. Harrison, Highway Engineer



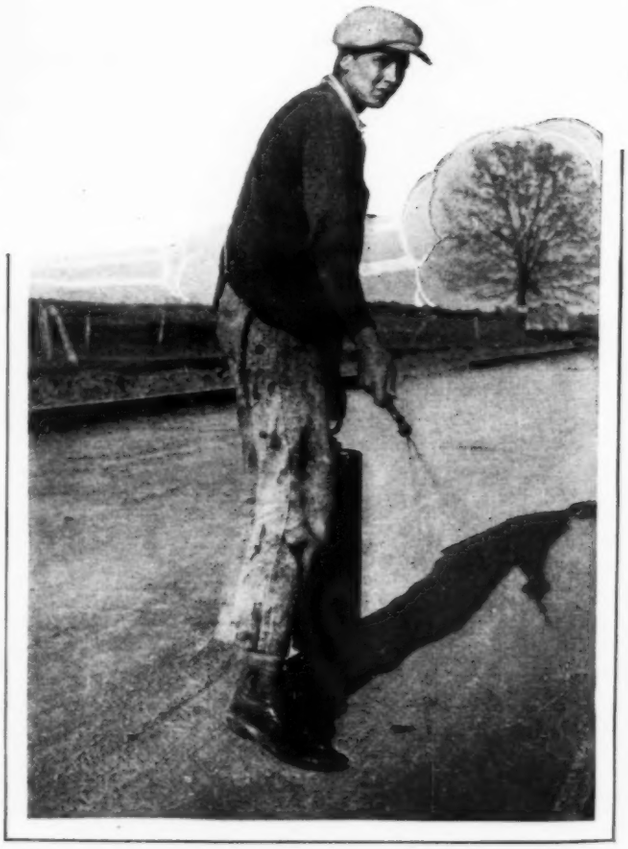
This sprayer ordinarily used on shrubs and plants is saving money on a road job

A SMART contractor can always find some way of doing work that nobody ever thought of before. And when he is aided and abetted by an equally smart engineer all bets are doubled. The photographs which accompany this article prove this statement. They were taken on a concrete road job handled by McGuire & Cavender at Texarkana, Texas, D. K. Caldwell, engineer, and show how some everyday garden tools were impressed into service as part of the road building plant.

The two photographs on this page show the use of an ordinary spray tank commonly used in spraying shrubs and small trees for oiling the forms. A couple of quarts of refuse oil, as drained from the crank case of trucks used on the job and allowed to settle in a tank or barrel, are put into the spray can and the pressure pumped up as for spraying trees. Handled in this way, this refuse oil can be sprayed on to the forms more evenly than it can be applied by brush and much faster.

As a matter of fact, the work of spraying can be satisfactorily done at a walking pace of about 100 ft. a minute which reduces the labor involved in spraying forms to the time of one man used less than an hour a day. Less than half the usual amount of oil is used, although as waste oil commonly is used for this work, this is not an important matter. The cost isn't enough to do any real worrying about.

A more important consideration is the cost of brushes which is entirely avoided by this method. The spray outfit shown in these pictures cost $7.50 and after having been used for three or four months seemed to be in as good condition as ever. If the oil has not been allowed to settle until it is reasonably clean the nozzle will clog occasionally, but no other difficulty has been encountered.



The operator can spray the forms evenly with oil while walking along at a pace of 100 ft. per minute

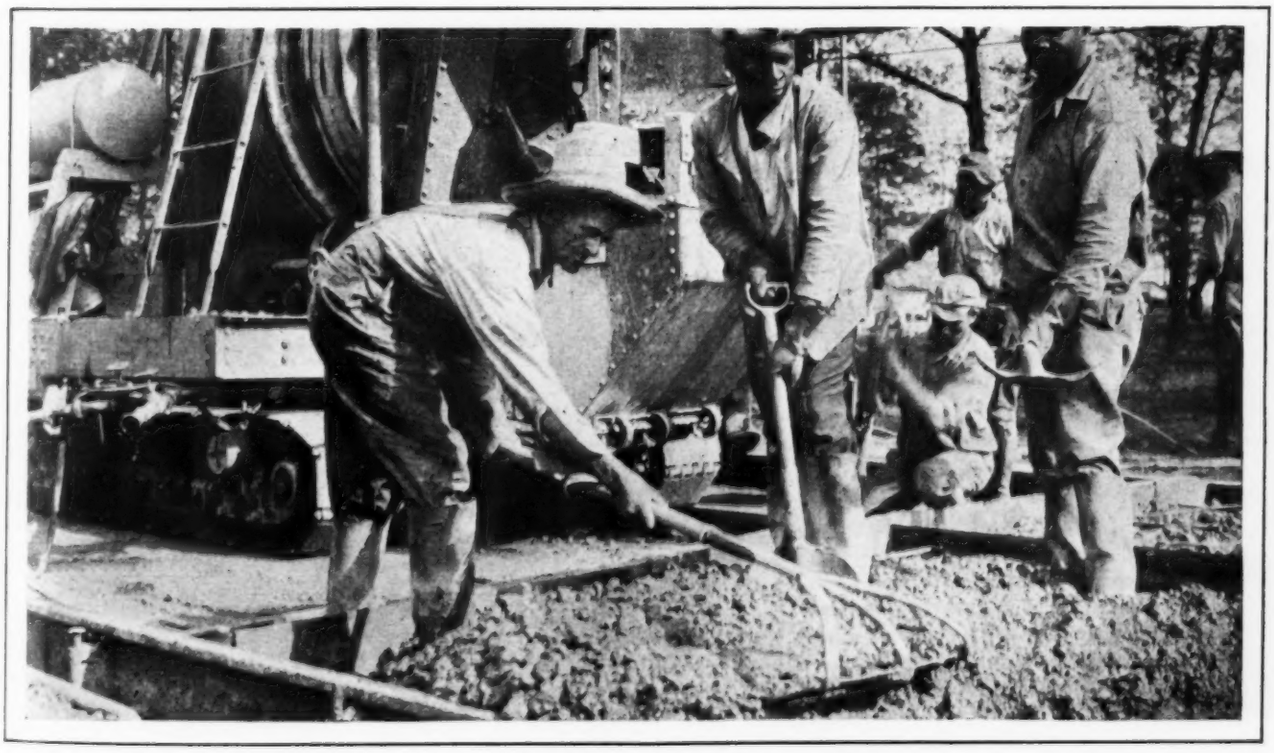
The use of a rotating spray nozzle in wetting down the pavement also has proved to be a real labor saving

Good On Road Job

A rotating sprinkler of the kind that can be seen on every lawn is shown here wetting down a newly laid concrete road

device on the same job. Three or four of these, moved at regular intervals, wet the covering over the pavement more evenly than a laborer can be depended on to do the work and make it possible for him to give at least a part of his time to other work. The one requirement is an adequate water supply. And if concrete is to be properly cured an adequate water supply is pretty much of a necessity.

The solid rake shown in the photograph at the bottom of this page has proved more effective than either a shovel or a hoe in distributing the concrete just ahead of the finishing machine.



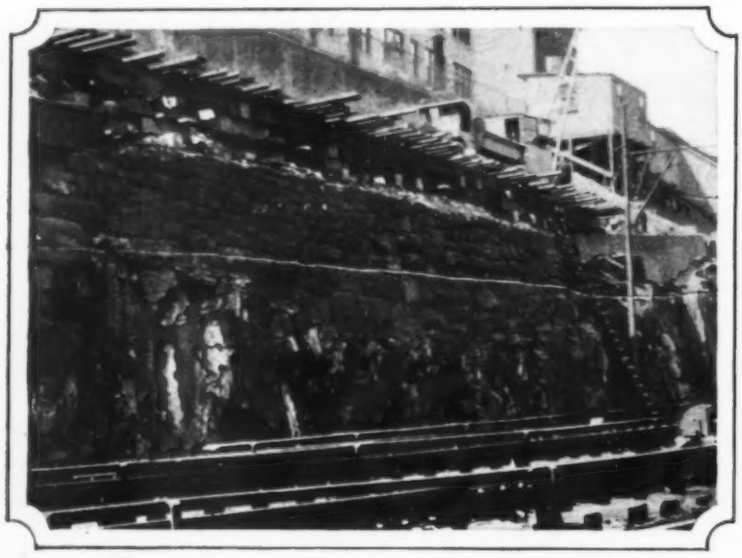
A solid rake proves extremely effective in distributing concrete fresh from the mixer

Working On A Narrow Shelf

Small Crane Handles Various Phases of Job Where Space Is Scarce

THE construction job which looks hard and proves easy is a joy to the contractor's heart, and when it proves easy because he has planned wisely and picked the right equipment, he gets a taste of that grand and glorious feeling made famous by Mr. Briggs.

A job which is worked out this way is the widening of a railroad cut for the Pennsylvania Railroad at Journal Square, Jersey City, handled by Henry Steers, Inc., of New York. This widening was necessary in connection with the enlargement of station facilities and included the removal of considerable old masonry, earth and rock and the construction of a new concrete retaining wall. The rock to be excavated ran from 8 to 30 ft. in depth and from 0 to 8 ft. in width.



The old masonry which had to be removed to make way for the new concrete retaining wall. A timber ramp, with the crane working on it, may be seen in the upper part of the photograph

The original examination of the work gave the impression that the job would be difficult to plant. It was necessary to have power available, not only to handle the excavated material, but also to cover blasts and to uncover tracks that became blocked as the result of blasts, as, of course, it was necessary to keep the tracks open for the frequent trains which pass over the Pennsylvania and Hudson and Manhattan railroads at that point.

The contractor was not allowed to use either the concourse south of the work, or the tracks to the north. The steep slopes between the bottom of the retaining wall on the south and the top of the railroad cut on the north appeared to preclude the possibility of a berm either for a roadway or of sufficient space for a crane without undertaking costly underpinning of the retaining wall.

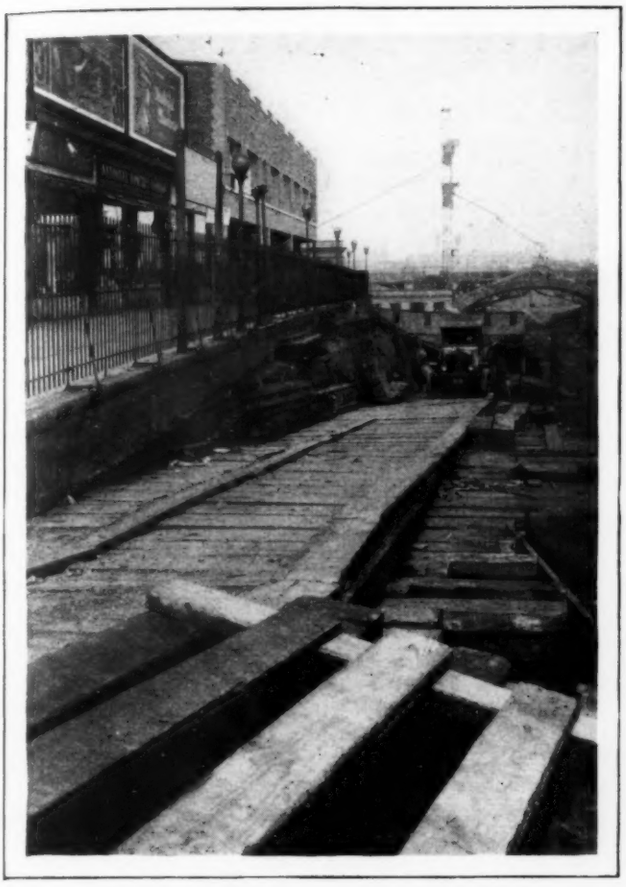
At this point in the planning, a study of a profile of some cross sections disclosed the fact that it was possible to construct a roadway without underpinning, so it was decided to use a small crane of the type that can be mounted on crawler traction and such a crane was obtained. Timber ramps were constructed on which the crane worked. Motor trucks backed down these ramps to the crane which filled them with rock lifted from the bottom of the cut.

The photographs which accompany this article show how successfully the crane has been working. It has not experienced the slightest difficulty in taking care of every phase of the work and has aided materially in speeding up the job.

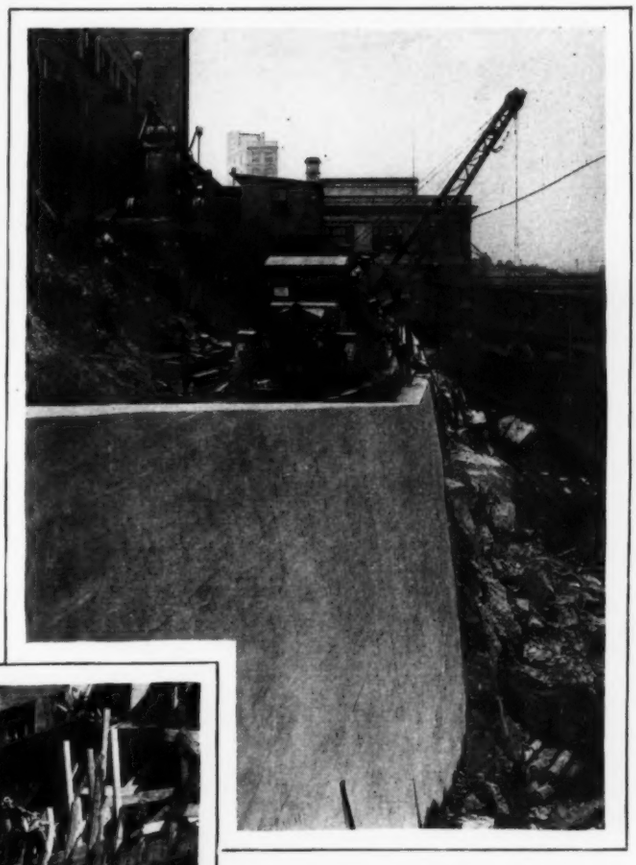
The two photographs on this page show the old masonry as it was and the new concrete wall which has taken its place. The three pictures on the opposite page show the crane at work on its narrow perch on the side of the deep railroad cut. They give a good idea of the small space available for the machine which handled the job.

For the railroad company, J. Jervis Vail is Assistant Engineer, and Paul D. Kline is engineer in charge. W. D. Malcolm is Chief Engineer for the contractor; J. W. Fitzpatrick is general superintendent and W. C. Briggs is superintendent. The last mentioned gentleman is not the Mr. Briggs referred to in the opening paragraph, although it so happens that he is largely responsible for the "grand and glorious feeling" experienced by the Steers organization and the Pennsylvania Railroad engineers when this job got under way and everything moved along so smoothly. Perhaps it goes with the name.

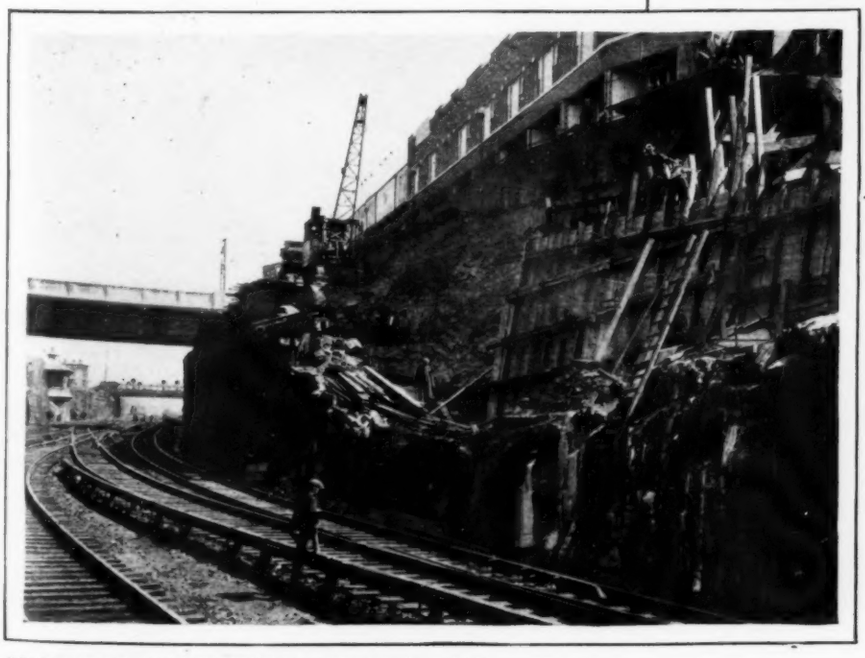
A section of the new concrete retaining wall which replaced the old masonry after the cut had been widened. The crane is still working on top of the wall. The mixer also may be seen in this photograph



The photograph at the left shows the beginning of the timber ramp on which the crane and motor trucks work. This photograph was taken from the top of the cut looking west. The ramp was used by the crane and the trucks which carried away the excavated material



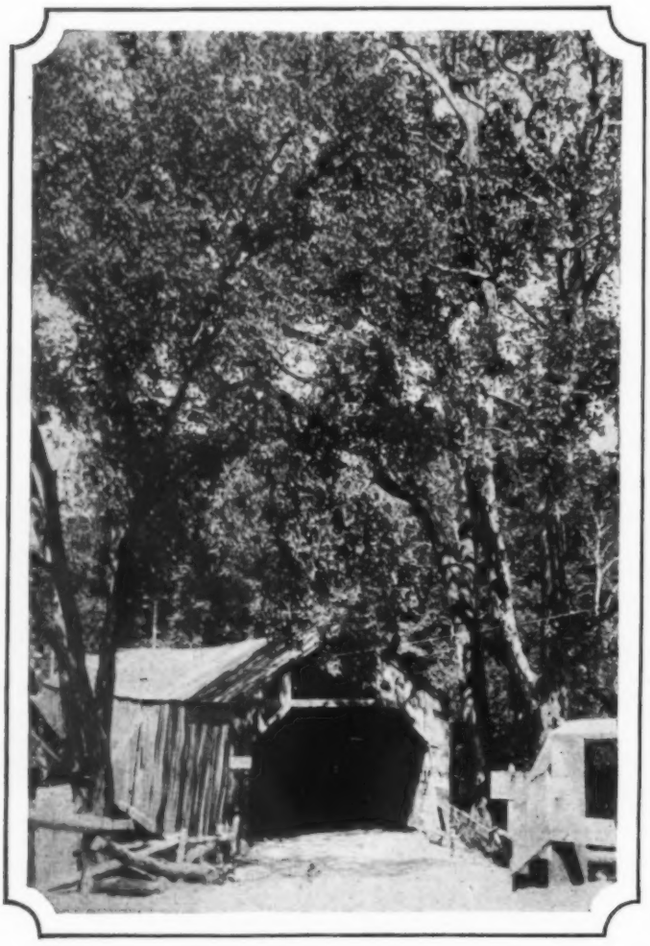
In the photograph at the right, the crane is shown loading a motor truck with rock lifted from the bottom of the cut. This picture shows the new concrete retaining wall



At the left is a view from the bottom of the cut showing the forms in place for the concrete wall and the crane at work above on the timber ramp

One More Veteran Retires

Steel Structure Replaces Old Covered Bridge Across Housatonic River



THE old covered bridge that used to be such a familiar sight in the eastern part of the United States soon will be nothing more than a memory. One by one, these picturesque old structures have been superseded by modern steel and concrete bridges until there are comparatively few of them left.

The state of Connecticut has just retired one of these veterans which, for more years than anyone can remember, has carried traffic across the Housatonic River at Gaylordsville. A new steel bridge has just been finished and the old structure will no longer be used.

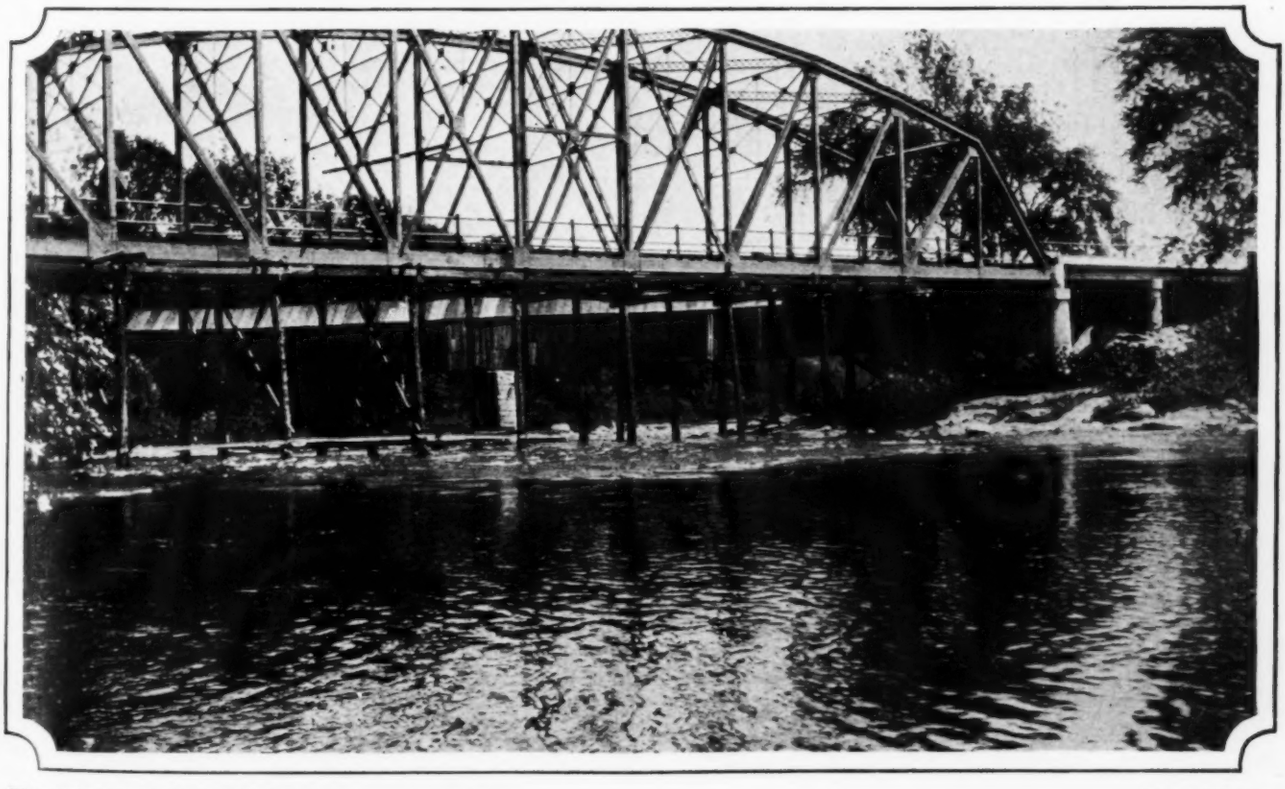
The new bridge has been built by the Berlin Steel Construction Company of Berlin, Conn. The concrete piers and approaches were built last fall by C. W. Blakeslee & Son of New Haven so that everything was ready for the erection of the steel this spring. The Berlin company erected the steel with two derricks, the larger of which may be seen beyond the bridge in one of the photographs. About a dozen men were employed on the job, and the new structure, which contains about 350 tons of steel, was put up in a comparatively short time. Sam Johnson was in charge of the work.

The photographs on this page show the old bridge and those on the opposite page show the new steel bridge which will carry future traffic. Gaylordsville is on the main state highway from Danbury to Canaan, most of which has recently been constructed by the state highway department. Recently a bus line has been put in operation between Danbury and Canaan and the heavy buses put a rather severe strain on the ancient structure, which seemed, however, to bear up well under the load.

The riveting gang at work on the new bridge

The derrick beyond the bridge erected most of the steel

Both old and new bridges may be seen in this photograph



Big Canadian Exhibition Outgrows

Work on New Building at Toronto Is Carried On Through Winter Months in Order to Provide Additional Exhibit Space and Restaurant Facilities

THE Canadian National Exhibition held each summer at Toronto has steadily increased in popularity with the years, and additional facilities for handling the throng have been required nearly every season. The Ontario Government has just finished a new building at Exhibition Park, some pictures of which taken during construction accompany this article. The actual work was handled by Sullivan & Fried of Victoria Street, Toronto, and the architects who designed the new structure were Chapman & Oxley, also of Toronto.

The new building is triangular in shape enclosing an open court and is constructed of reinforced concrete faced with natural stone and trimmed with artificial stone. The southwest elevation is about 350 ft. in length and is surmounted by a dome rising to a height of 120 ft. The other two elevations are about 250 ft. in length and at each of the three corners are entrances to the exhibit rooms. Each entrance has a tower about 75 ft. in height.

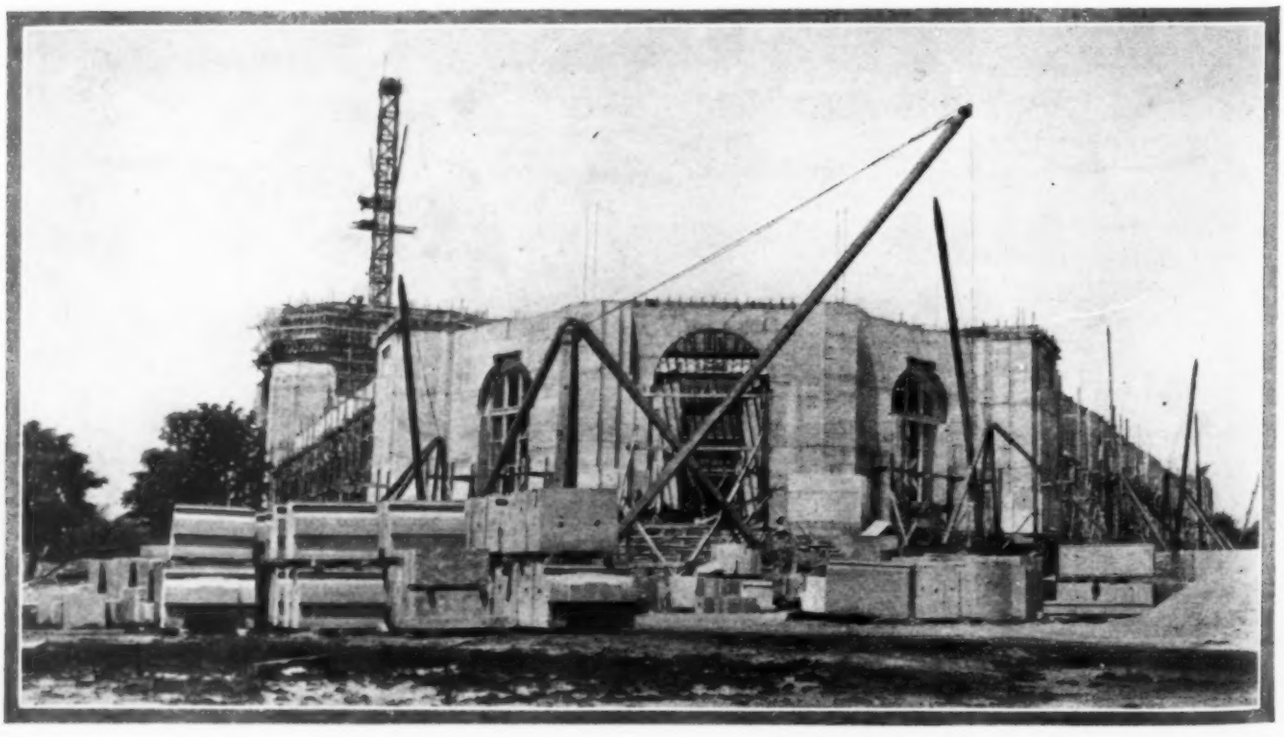
Work began Nov. 19, 1925, and because of the fact that the building had to be ready for the 1926 exhibition, which began on Aug. 28, construction went on throughout the winter months. Due precautions were taken to protect the concrete during the cold weather. The photograph at the bottom of this page shows the exterior of the southeast entrance. At the time it was taken, the concrete was being poured on the tower and along some of the side walls. The picture also gives a good idea of the kind of stone used for the trim, which is stored in the foreground.

The photographs on the opposite page show a view of the tower under construction and an excellent picture of the interior looking toward the same entrance is shown in the photograph at the bottom of this page. At the time this interior photograph was taken the exterior walls had been poured to their full height and the interior columns and beams were being poured. They were about half way up and the forms were in place for the upper sections.

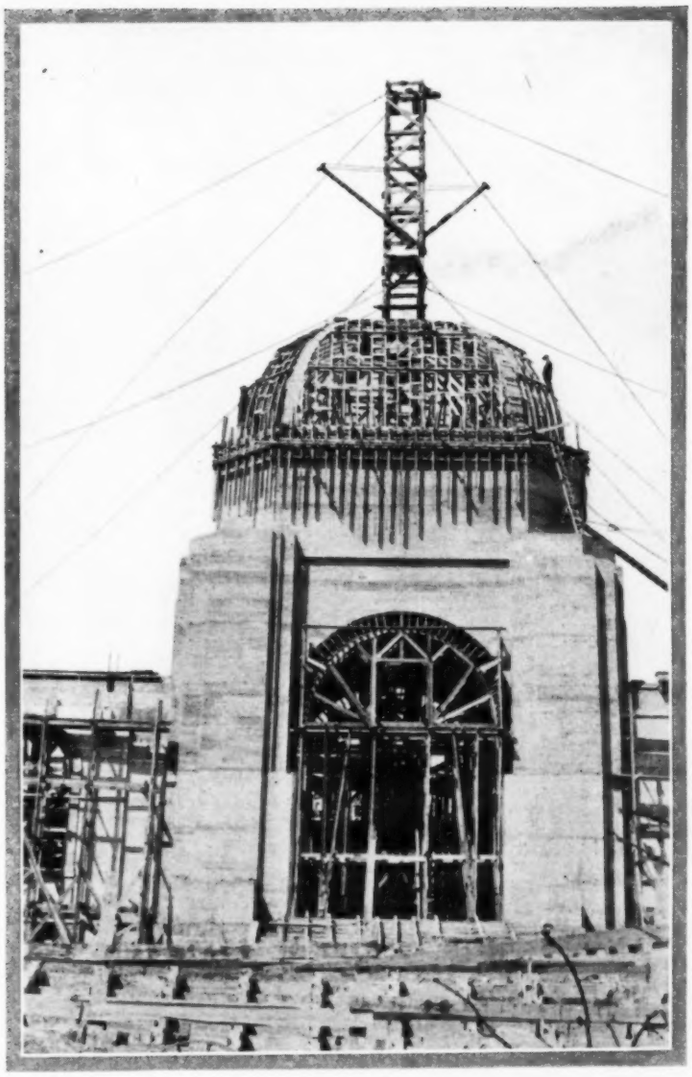
The building will be used for exhibition purposes and also will provide space for restaurant accommodations. The main exhibition area will be 42 ft. in width and 27 ft. high.

All of the photographs which accompany this article were taken by L. G. Jackson who has been working on the new building as clerk of works. In his letter enclosing the photographs Mr. Jackson expressed the hope that a description of a Canadian job would be of interest to readers of *Successful Methods* on this side of the border.

Exterior of Southeast entrance of new building

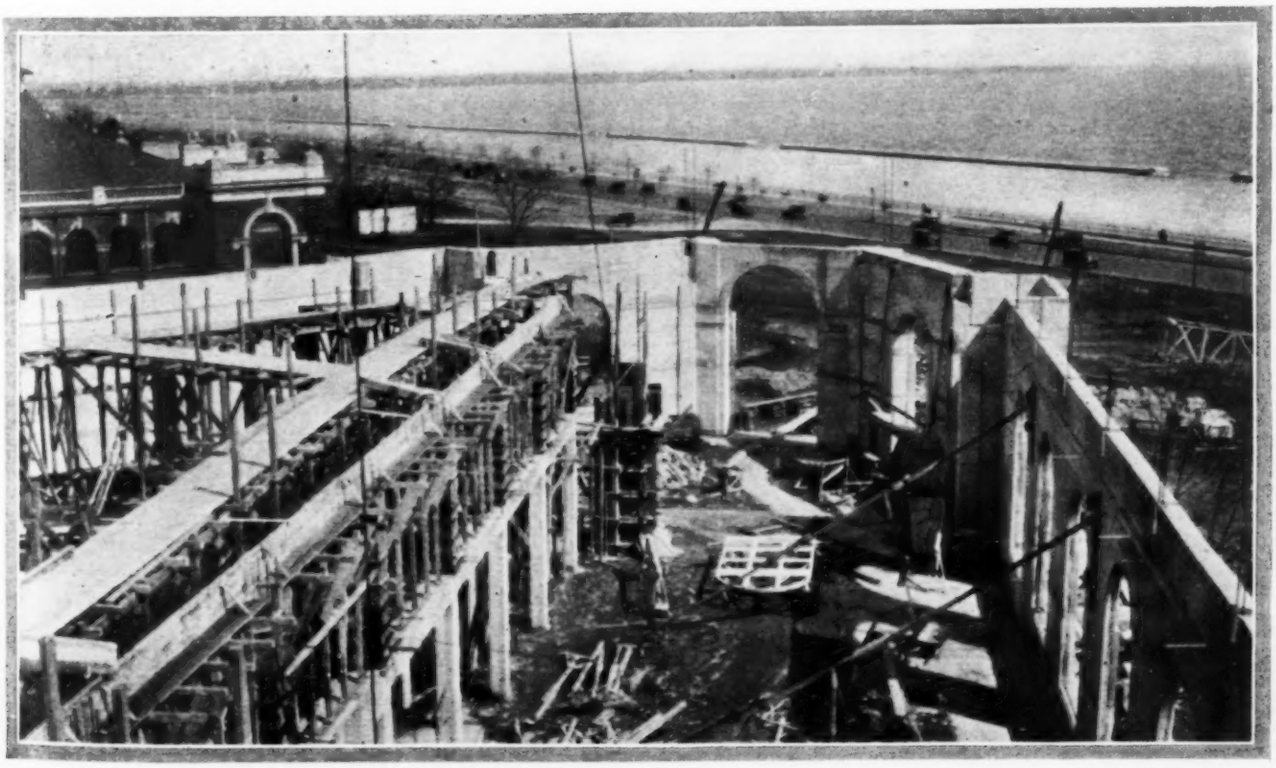


Its Quarters



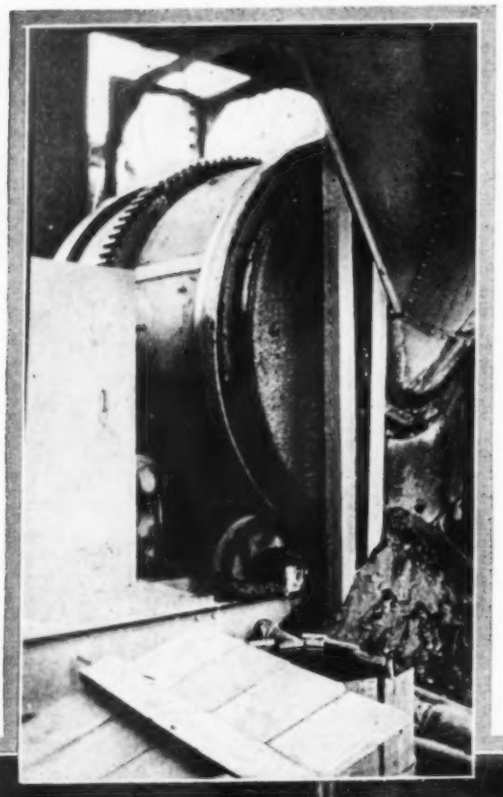
At the right—this tower which will be the main architectural feature of the building is 120 ft. in height. The photograph was taken after the concrete for the main portion of the tower had been poured and the framing for the tower was placed

At the bottom of the page is a view of the Southeast entrance from inside the building. It shows the exterior walls poured to their full height. When the photograph was taken the interior columns and beams were being poured



Pittsburgh's Three Yard Mixer

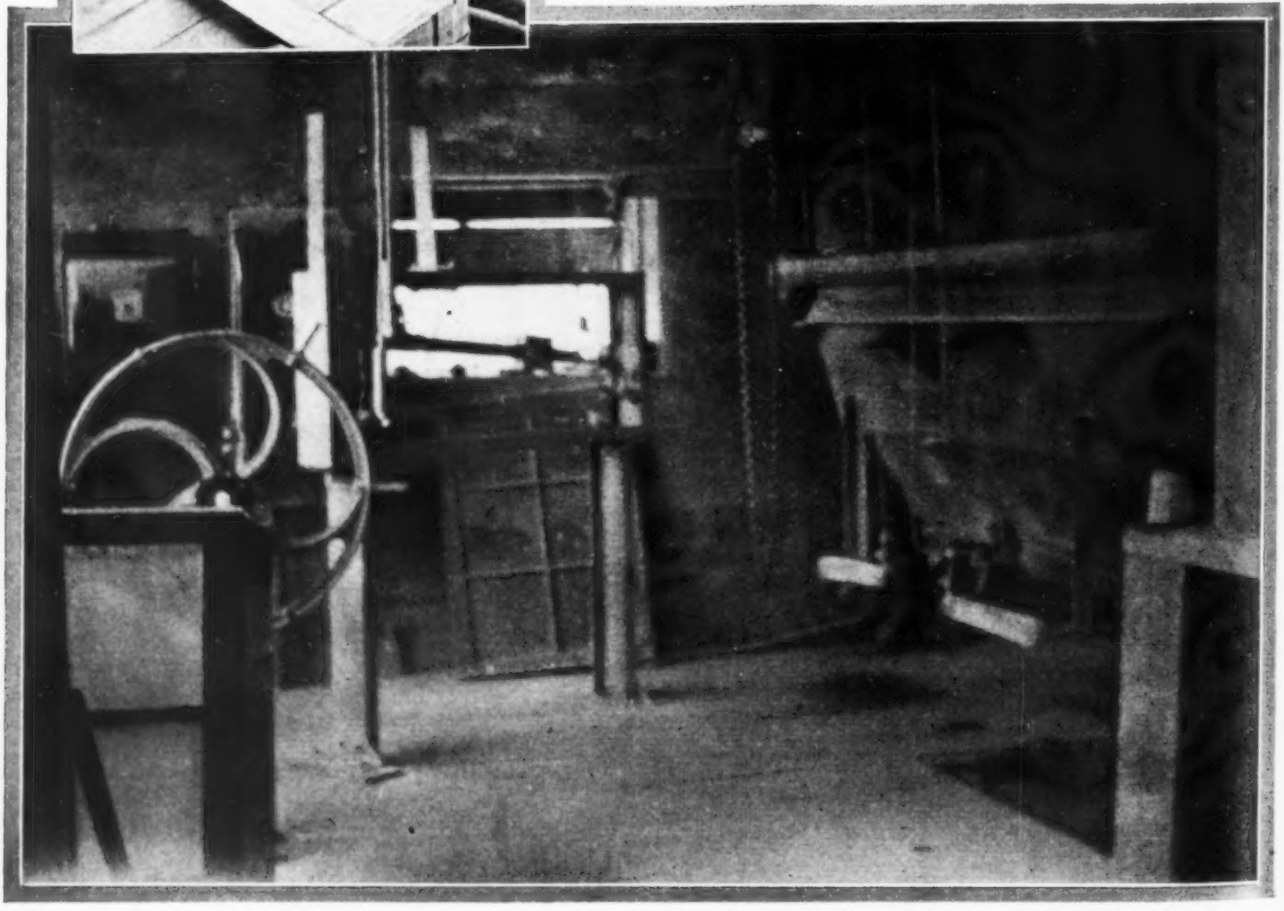
Big Machine Installed to Meet Demands for Concrete



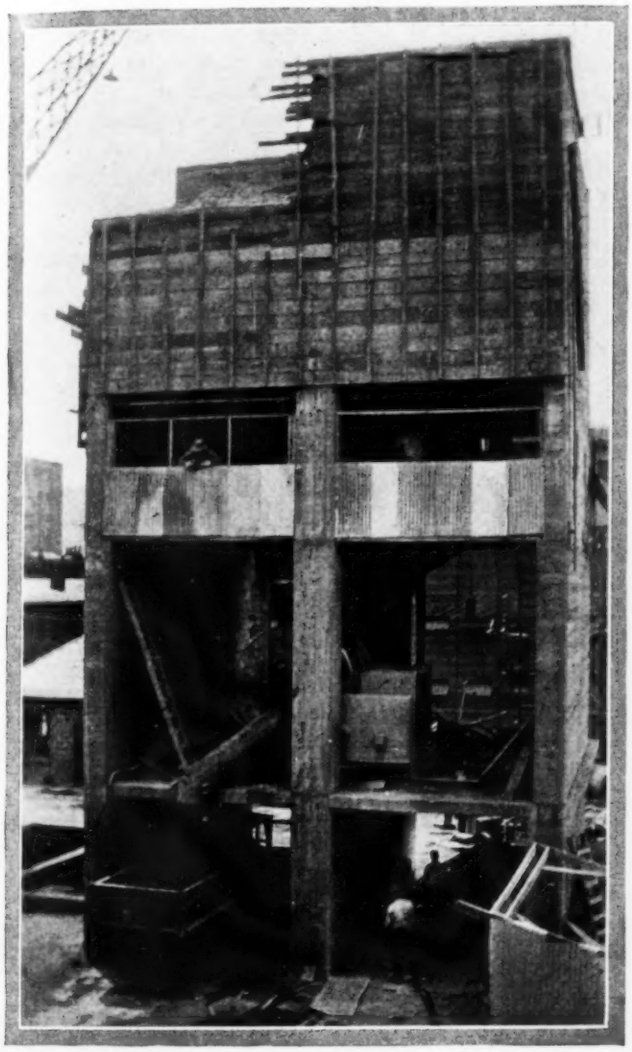
WHAT is believed to be the largest cement mixing plant for its purpose in the world has recently been put into service by the Ready Mixed Concrete Co. of Pittsburgh. The equipment includes a made-to-order Ransome three yard mixer and Blaw-Knox bins and measuring devices.

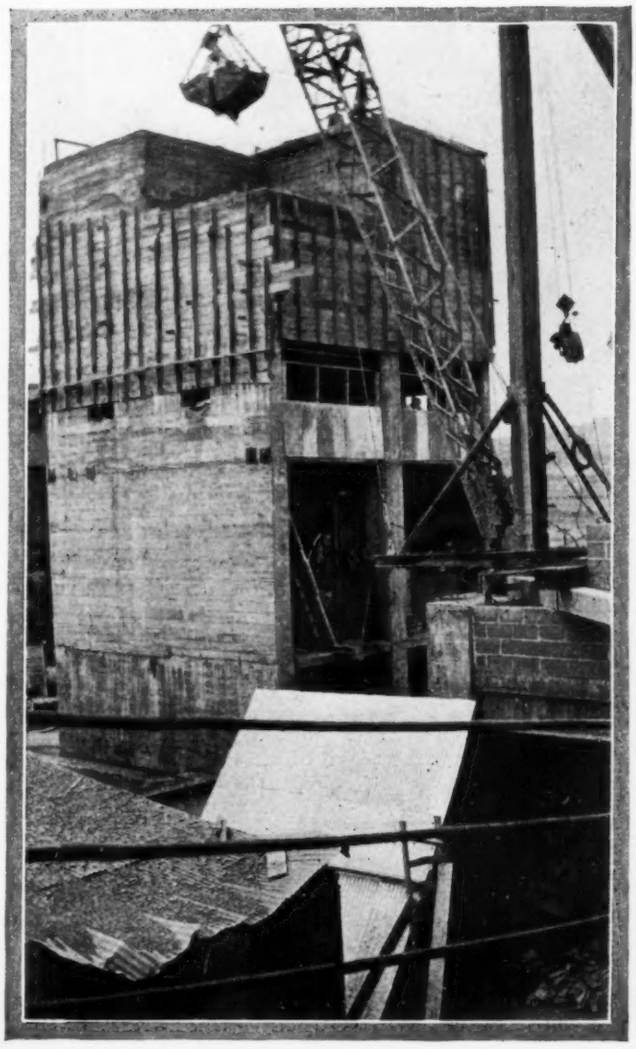
The mixer building is 28 ft. square, with four bins at the top, two for gravel and one each for sand and cement. The sand and gravel bins hold about 100 tons of material; the cement bin, about 450 bbl. A crane and clamshell bucket elevate material to the bins. Beneath each of the gravel bins are two hoppers, one adjusted to deliver aggregate for one yard of concrete and the other for two yards. When the full capacity of the mixer, three yards, is called for, both hoppers are discharged. A hopper and scale are attached to the sand and cement bins, and these materials are weighed to give the amount required for the mix desired. Two operators perform the work of measuring and discharging. The company began work in May, 1925, with a one yard mixer and has now tripled its output.

The photograph below shows the interior of the mixing plant with the scales and measuring hoppers. The picture at the left gives a good idea of the size of the big 3 yd. mixer



The photograph below shows the mixer discharging concrete into a truck. At the time this picture was taken the plant had not been entirely finished





Another view of the mixing plant showing the clamshell bucket elevating aggregates to bins built over the big mixer

Do You Want $25.00?

IF THAT SUM of money would prove useful to you, and you have a camera, and you are employed on a construction job, here is your opportunity. *Successful Methods* is offering its third $25.00 prize for the photograph most suitable to its needs taken by a man actually employed on the job shown in the photograph. Photographs should be accompanied by a brief description of the job, giving location, name of contractor, name of owner, size of job, when begun, when finished, etc. And don't forget your own name, your address and the nature of your work.

THE EDITOR of *Successful Methods* will act as judge and will determine which photograph is best suited to the needs of this magazine.

ALL PHOTOGRAPHS should be sent to *Successful Methods,* McGraw-Hill Publishing Company, Tenth Avenue at 36th Street, New York City, and plainly marked "Photographic Contest."

ANY PICTURE that is to be considered in awarding the $25.00 prize for the October issue of *Successful Methods* must be in this office not later than Saturday, September 11th. Those arriving after that date will be considered as entered in the November contest. All contest photographs, other than the prize winning photograph, which are used in *Successful Methods,* will be paid for at the rate of $1.00 each. Please don't send photographs of jobs that are now ancient history.

Laying Concrete Roads On

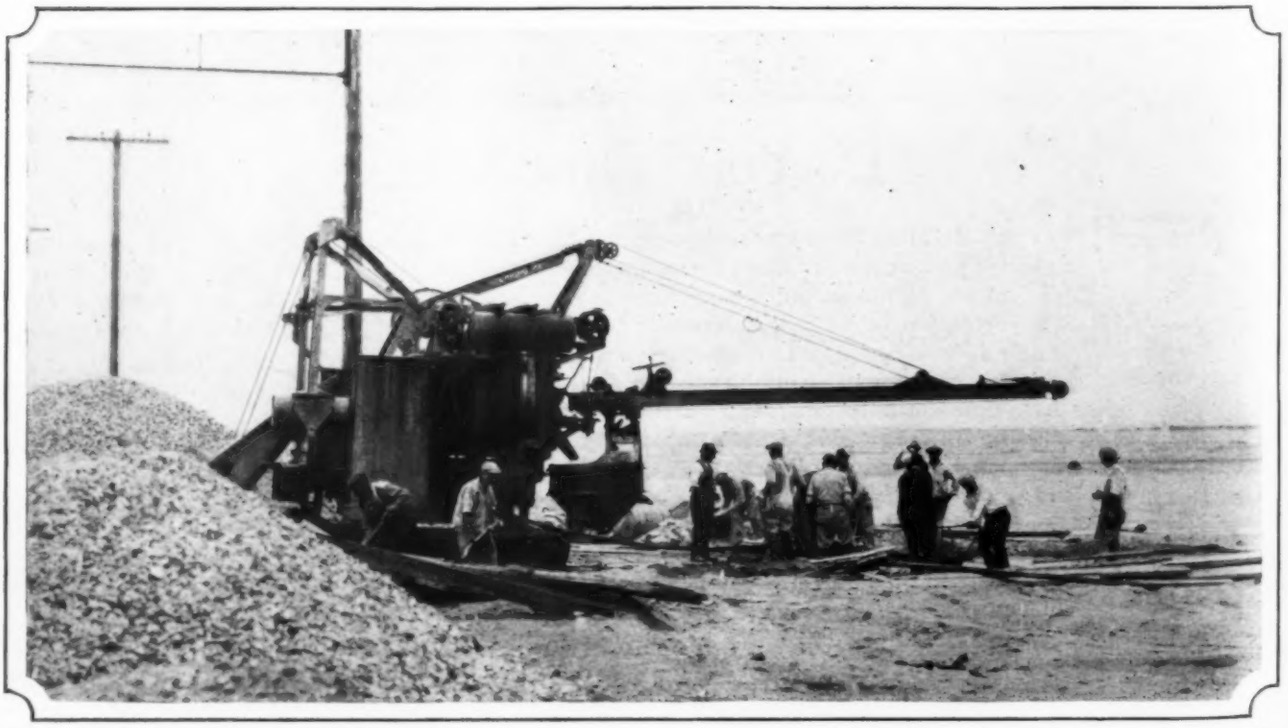
Special Equipment Needed to Keep Machines from Sinking In

A FIRM foundation, although desirable on a construction job, is not necessary, as Charles E. McCrodden is proving on a real estate development on the shores of Jamaica Bay, Long Island. Mr. McCrodden specializes in real estate developments, and at the present time has a force of more than 300 men, 50 trucks and various other machines at work on 7 such projects in the vicinity of New York.

On the job near Jamaica Bay, he is building about 9 miles of concrete road and 18 miles of sidewalk for the E. G. Burke Development Company. All this work is being done on a sand filled meadow which has made it necessary to work out new methods of handling the heavy machines and the materials.

The photographs show how Mr. McCrodden has overcome the difficulties which confronted him. The sand and cement are brought to the mixer in scrapers hauled by teams and the stone is brought in on Ford trucks. In order to keep these trucks from sinking in the sand, Mr. McCrodden has built a double channel timber track, which is shown in the large photograph on the opposite page. About 600 ft. of this track is in use and the trucks back in on it to the mixer. The mixer itself stands on a wooden platform. Mr. McCrodden and his foreman are shown on the opposite page. The big boss keeps in close touch with all of his jobs.

The three small pictures show the methods used in getting sand, water and cement to the paver



The paver is shown at work building roads in the lower photograph

Sand Filled Meadows

Trucks back in on channeled timber track

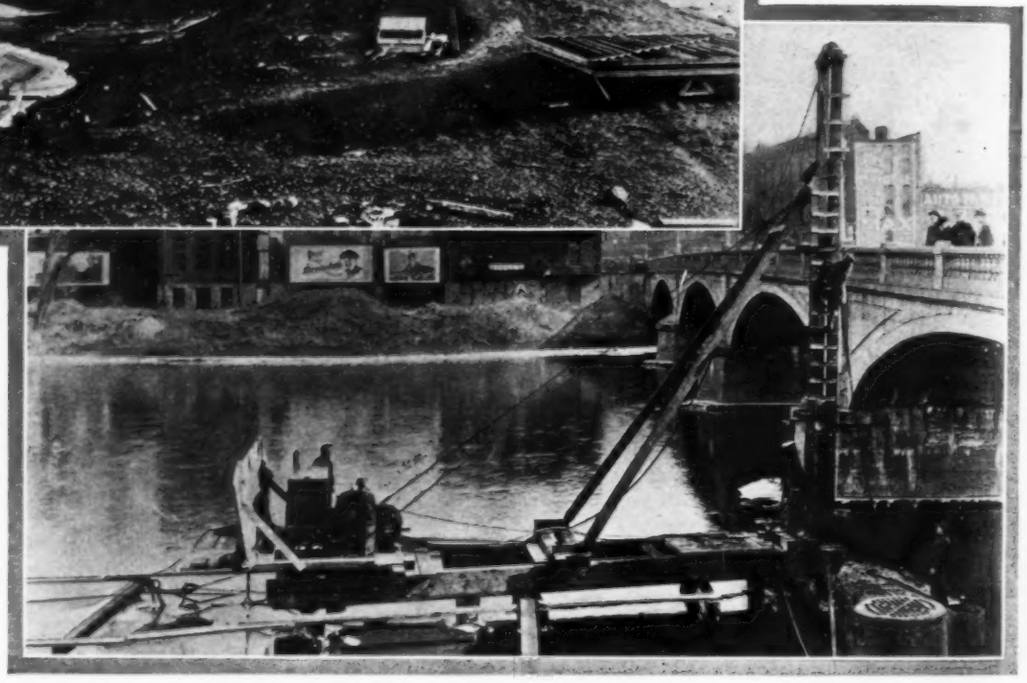
A Civic Center On An Island

Cedar Rapids is Preparing Land in Midstream for Erection of Community Buildings

THE city of Cedar Rapids is creating a sort of civic center on an island in the middle of the Cedar River. In order to put up the buildings on this island it is necessary to build up the banks of the island by the construction of a retaining wall and then fill in the space within the wall.

The work on the new wall is being done by the Allied Contracting Co., Inc., of Omaha, and a 60-hp. double drum Clyde gasoline hoist is being used for driving similar to that which is to be built around the portion of the island in the foreground in order to provide for filling in.

A concrete wall is being built around this island which will be used for community buildings



The piles are being driven by the outfit shown in this photograph. A gasoline double drum hoist furnishes the power

The upper photograph on this page shows a portion of the island on which the new buildings are to be erected. On that portion of the island beyond the bridge, some buildings already have been put up, and under the bridge may be seen a section of concrete wall the large number of piles which are necessary. These piles are being driven at the level of the water using a 2,500-lb. hammer which is handled by the gasoline hoist. The lower photograph shows the outfit in operation.

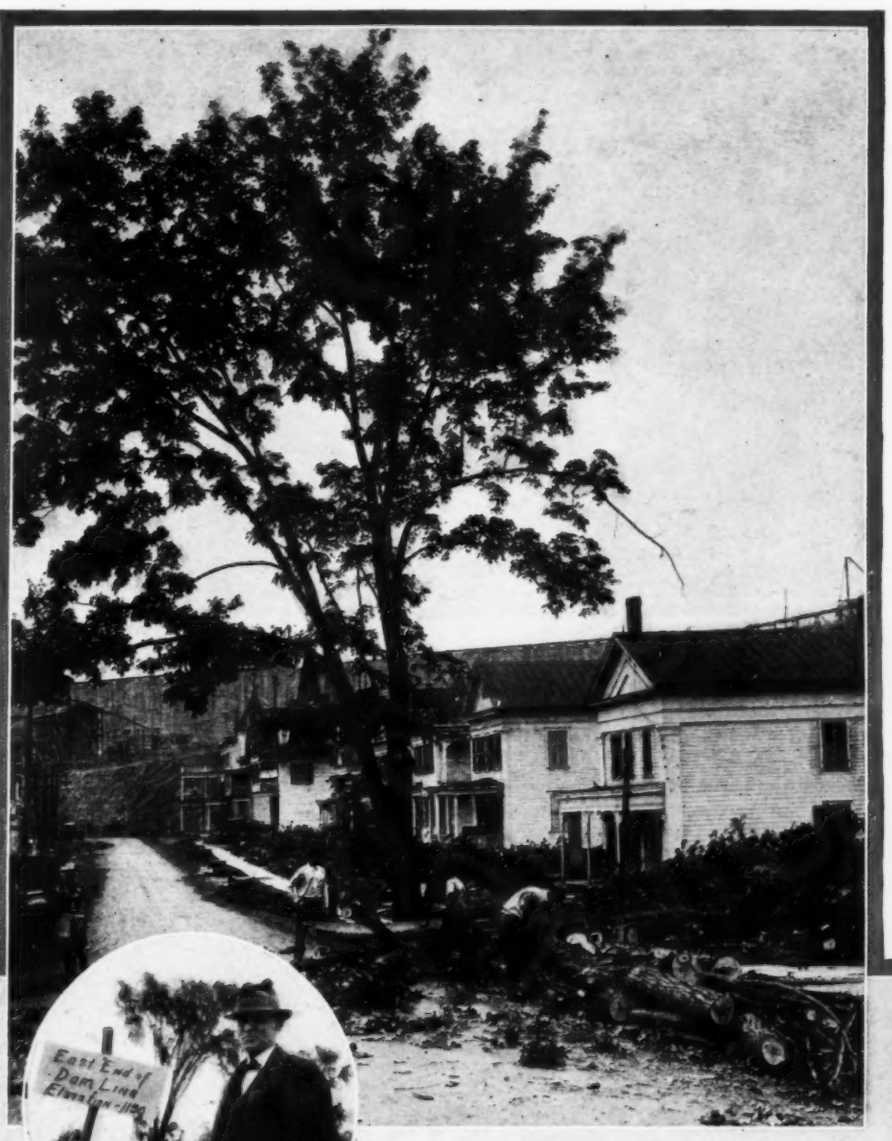
Get out your Camera

Get after the $25.00 prize

Conditions of October Contest on Page 15

The Waters Are Rising Where Gilboa Once Stood

New York City's New Dam in the Catskills Is Finished



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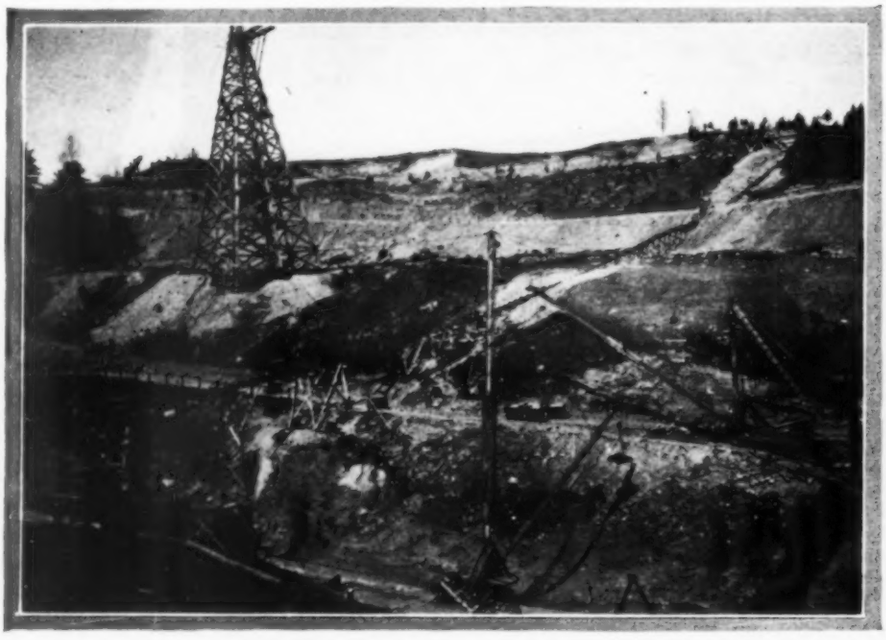
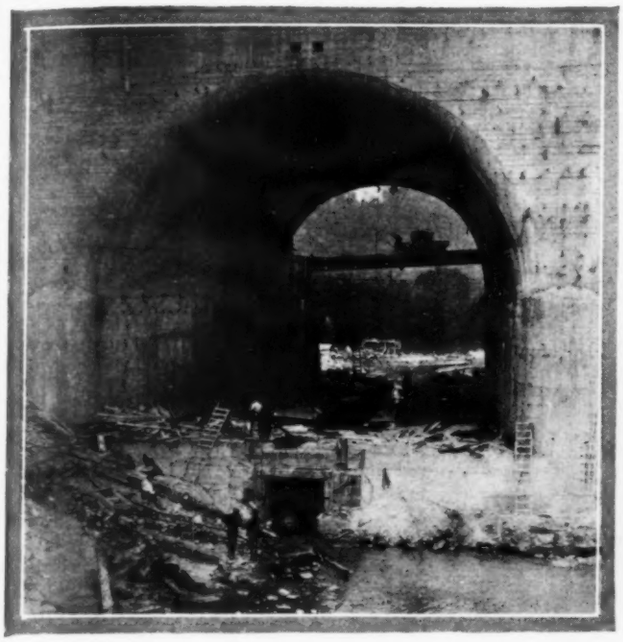


The photographs on this page show the site of Gilboa Dam as it appeared in the spring of 1921. The cableways, which played so important a part in the building of the big dam, may be seen plainly. The lower photograph shows the 9-ft. steel pipe which were installed to take care of the flow of Schoharie Creek during the building of the dam.



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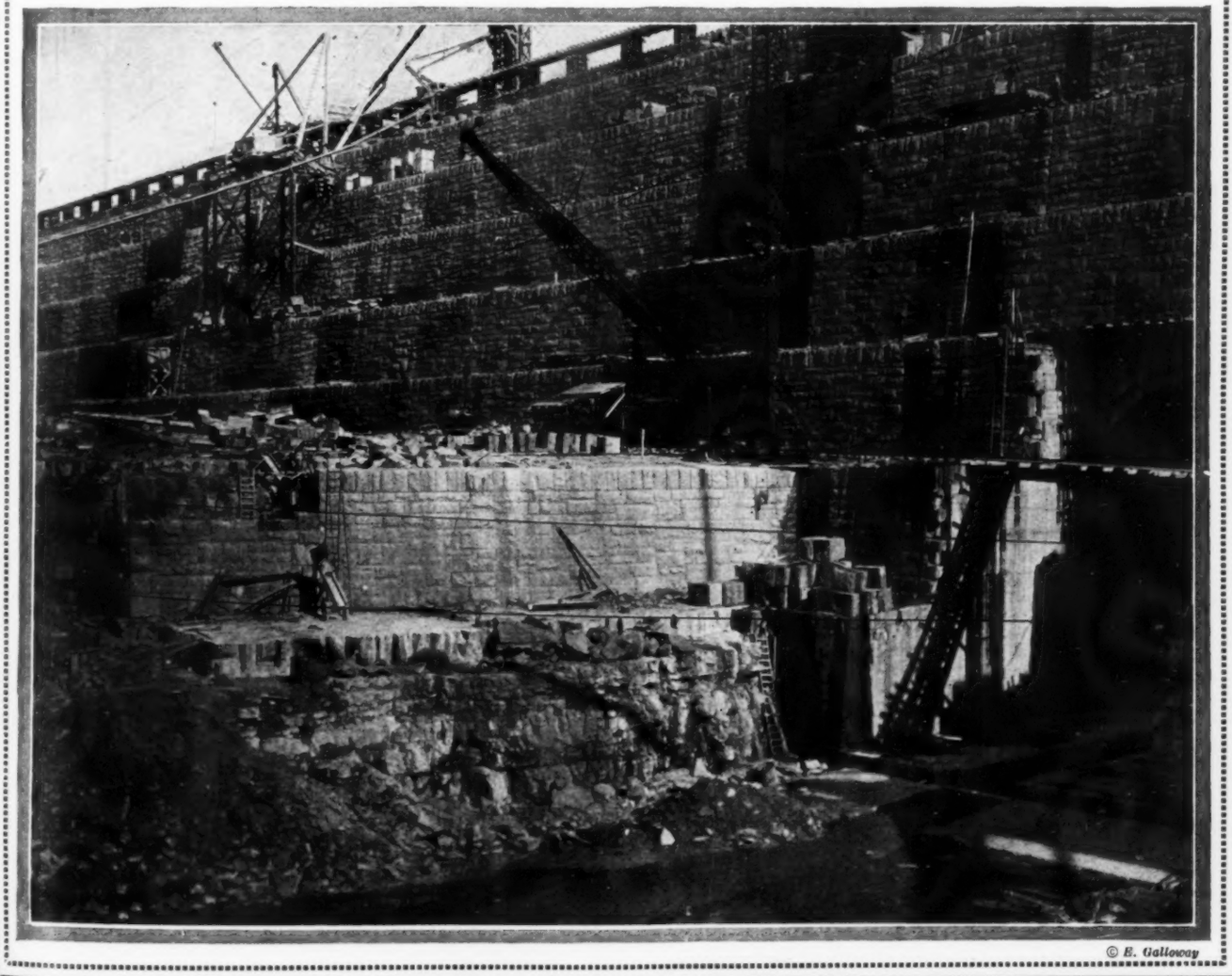
One of the gates of the Gilboa Dam is shown in the upper left-hand photograph.

The handling of stone used in facing the spillway channel is shown in the upper right-hand picture which was taken in August, 1924.

The large photograph at the bottom of the page which was taken a little more than a year ago gives a good idea of the status of the work at that time. The steel derrick loads the facing stone on the cars for distribution along the dam.



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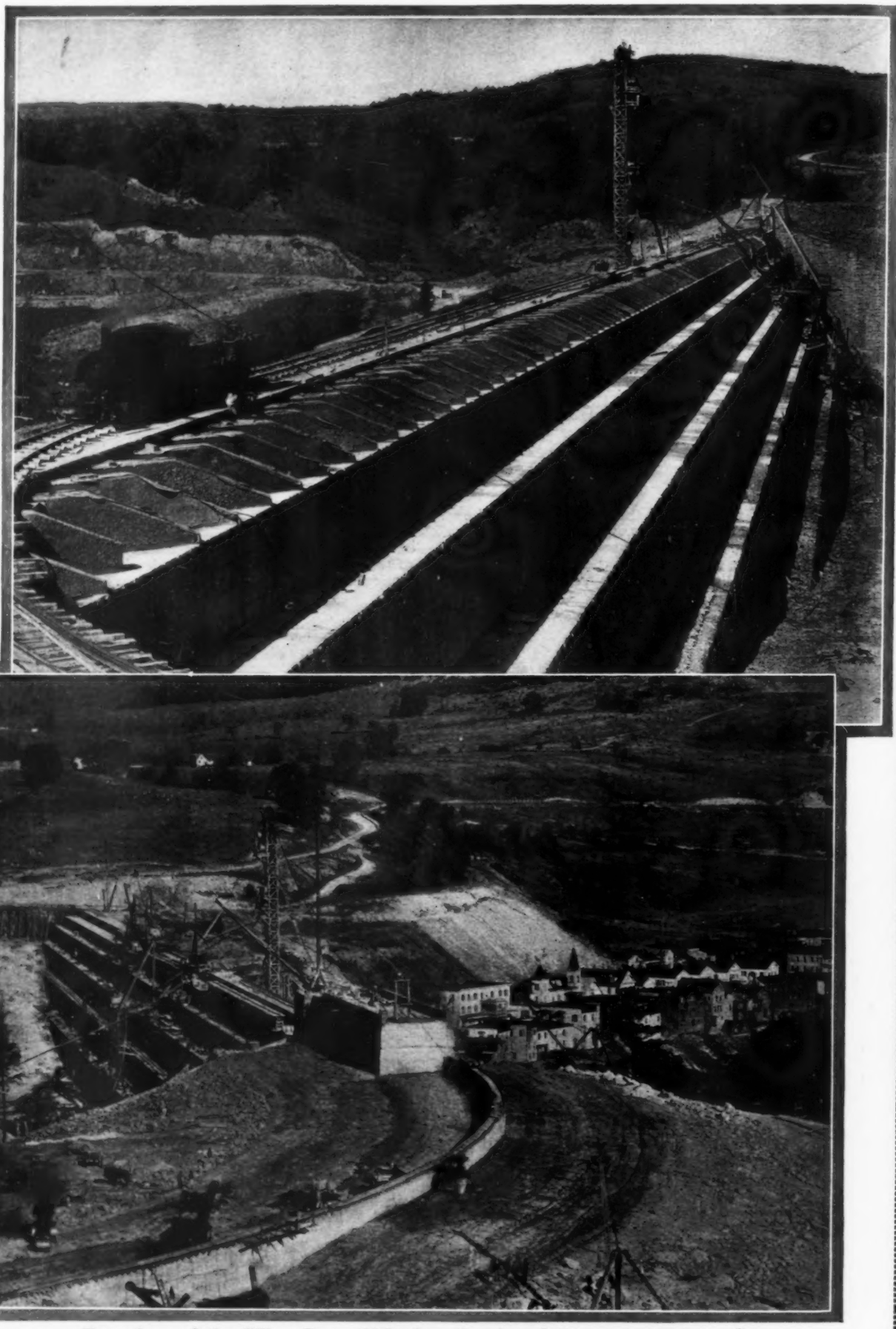


Two views of the Gilboa Dam which show the size of the great structure. In the upper photograph the concrete baffles on the top step of the dam may be seen.

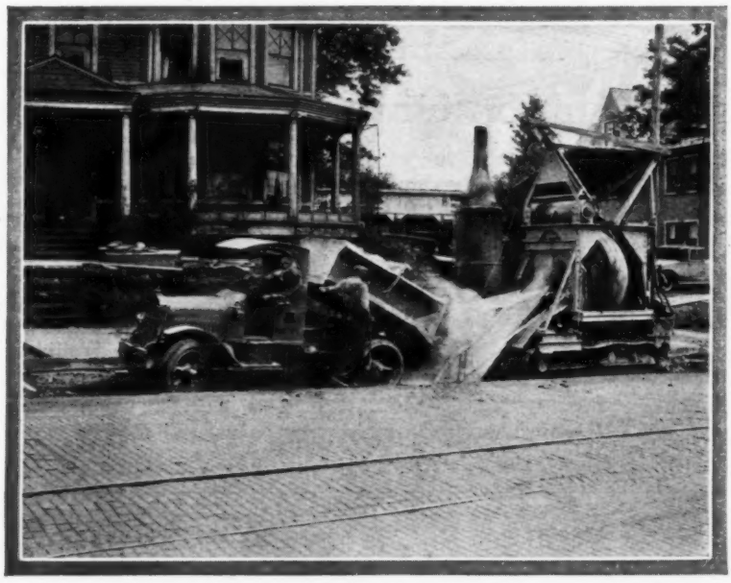
© E. Galloway

A Machine on the Job is Worth Two In the Yard

Big Paver Handles Sidewalk Work To Fill In Idle Time

USING the machine at hand often gets a job done sooner and cheaper than to wait for the right machine to be moved to the job. This was the experience of the Asheville Paving Company with a 21-E Foote paving mixer in laying concrete sidewalk in Asheville, North Carolina, as shown in the accompanying photographs.

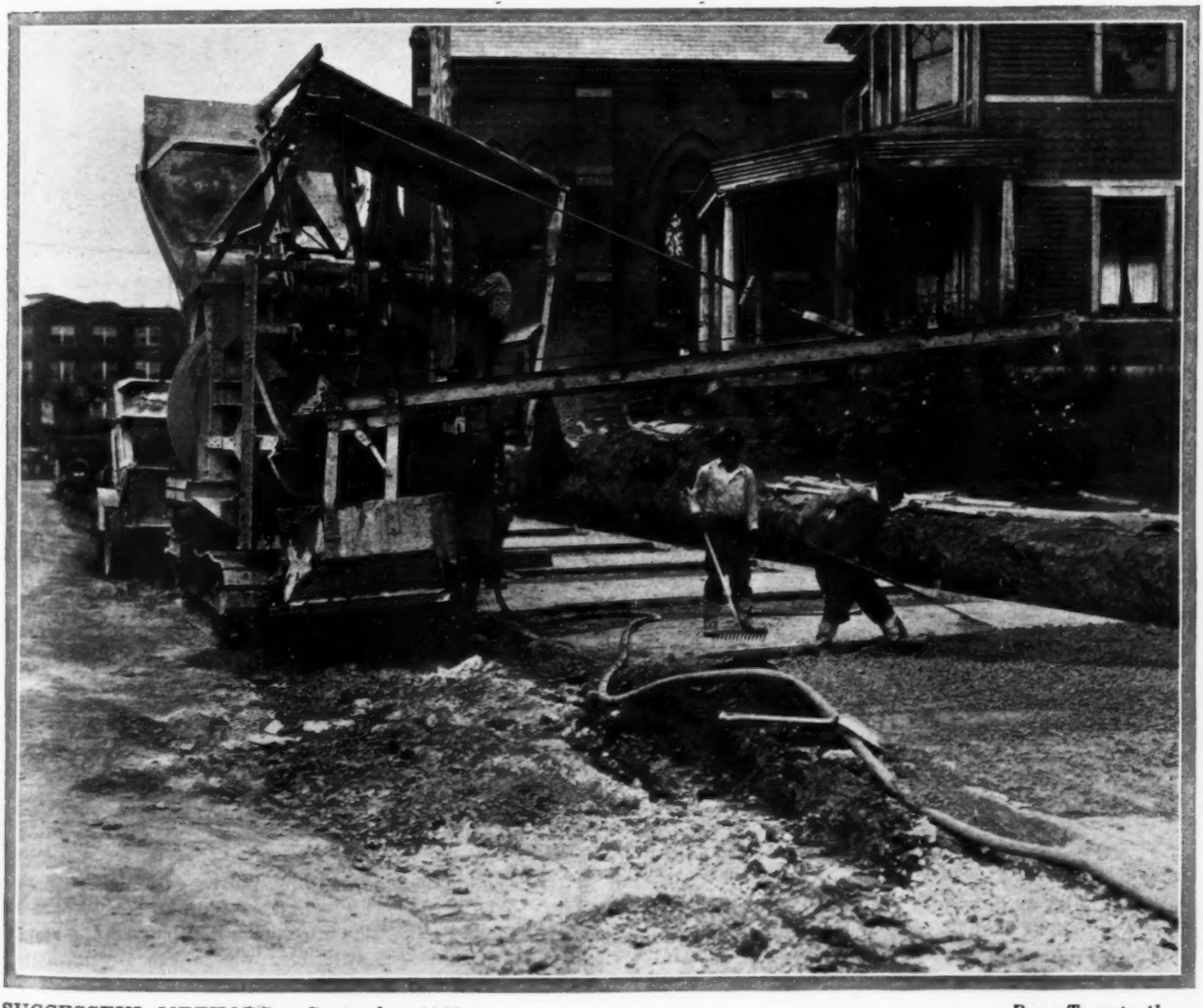
The Foote paver was held up on account of service-main work on a street-widening contract. The Asheville Paving Company also had the sidewalk work, so they decided to mix the concrete for it in the paver, pending the time that they could get at the paving work.



Sidewalk Work with 21-E Paver

Five men made up the crew on the walk work; one man on the machine, one at the charging skip, two at the discharge end, and a foreman.

The slab was laid in alternate cross strips, which were allowed to set before the intermediate sections were placed. This method, called for in the specifications, required the paver to travel the full



length of the job twice. With three-ton Mack dump-body trucks delivering the material in batches directly to the charging skip, that end worked smoothly with only one man there. On account of the narrow strips in which the concrete was laid and the constant moving required, the mixer could not work to anything near capacity. The two men at that end could, however, spread and finish a lot of concrete sidewalk in one day.

It was found cheaper and better, under the conditions on the job, to use the paver in this manner, than to bring a small portable mixer just for the walk work. There also was the advantage of keeping the nucleus of the mixer gang at work, and so having them on hand when the paving was resumed.

Government Dam on Ohio River Nears Completion

THE photograph on this page shows work under way on Lock and Dam 45 at Addison, Ky., one in the series of 51 locks and dams on the Ohio River between Pittsburgh and Cairo. It shows a cofferdam constructed of wood, filled with mud, sand and rock. In this cofferdam the beartraps, fixed weir and abutment are now being constructed. The beartraps consist of three piers shown partly completed, between which two overlapping leaves of steel will be placed, hinged at the upstream and downstream ends, respectively. With the use of the head of water assisted by compressed air these leaves may be lowered or raised as desired, thereby controlling the elevation of the pool above the dam.

The mixing plant is situated on the cofferdam and the concrete transferred to various places by means of a small railroad. The sand, gravel and cement are towed on barges to the site and a derrickboat, shown just outside the cofferdam, charges the mixer.

A pumpboat, which is simply a decked barge, carries three 15-in. suction pumps which pumped the cofferdam dry before the construction started and keep it dry during construction. The work probably will be finished this month.

Cofferdam is kept dry by pumpboat in river

Our Cover Comes from Canada

THE cover photograph this month comes from British Columbia and shows a road job with a background that is typical of Canada's most western province.

The machine which is doing the work is a Byers Bear Cat equipped with a ½-yd. shovel. It is operated by the Department of Public Works of British Columbia. The photograph was taken on a highway near Cranbrook, B. C. The Bear Cat has been doing excellent work and is a valuable unit in the Department's construction and maintenance equipment.

Cottage Covering for Compressors

THE point at which sightliness and utility combine to please both the passerby and the owner of construction equipment has apparently been determined to a nicety by George Kelly, master mechanic for the George J. Atwell Company of New York. Air compressors covered by attractive housings like the one illustrated have for several years won the eye of New Yorkers. What is more important, they have won a reputation for serviceability with the Atwell Company.

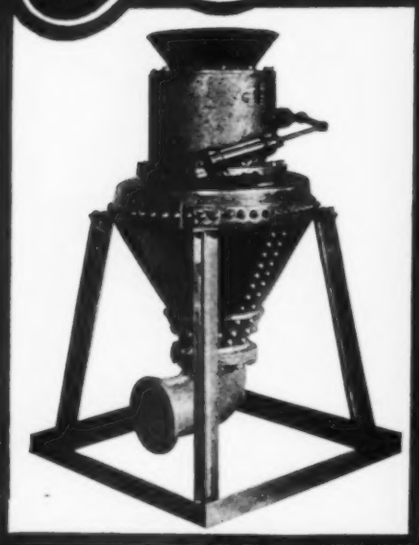
Mr. Kelly was confronted with the old problem of how much could be spent economically in making his compressors portable and in protecting them from the weather. He decided to try a permanent housing and chassis. The experiment proved so satisfactory that at the present time the Atwell Company has six large compressors on wheels and under hood. Five of them are Ingersoll-Rand 14 by 12 machines weighing 7,650 lb. stripped, and the sixth is 12 by 10 weighing 4,900 lb.

Two views of one of the Atwell compressors neatly covered by a bright green house

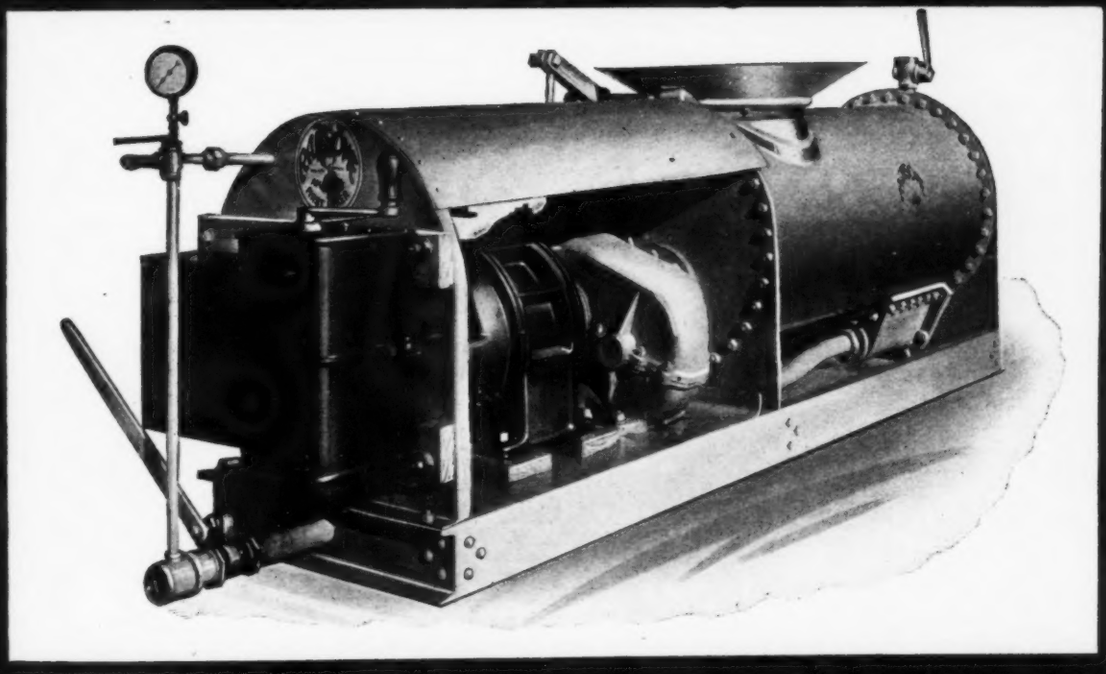
The photographs show the neat appearance of the superstructure. The chassis consists of four 14-in. I-beams laid on Mack axles equipped with rubber-tired wheels. The familiar Atwell green adds to the neat appearance of the outfits.

The compressor shown in the photograph was working on Forty-second Street, near Fifth Avenue, one of the busiest sections of New York. Judging by the comments of the thousands of passersby, the outfit advertised the Atwell organization about as efficiently as it performed its duties in connection with the excavation work.

Ransome



RANSOME
REG. U.S. PAT. OFF.
AMERICA'S
FIRST MIXER



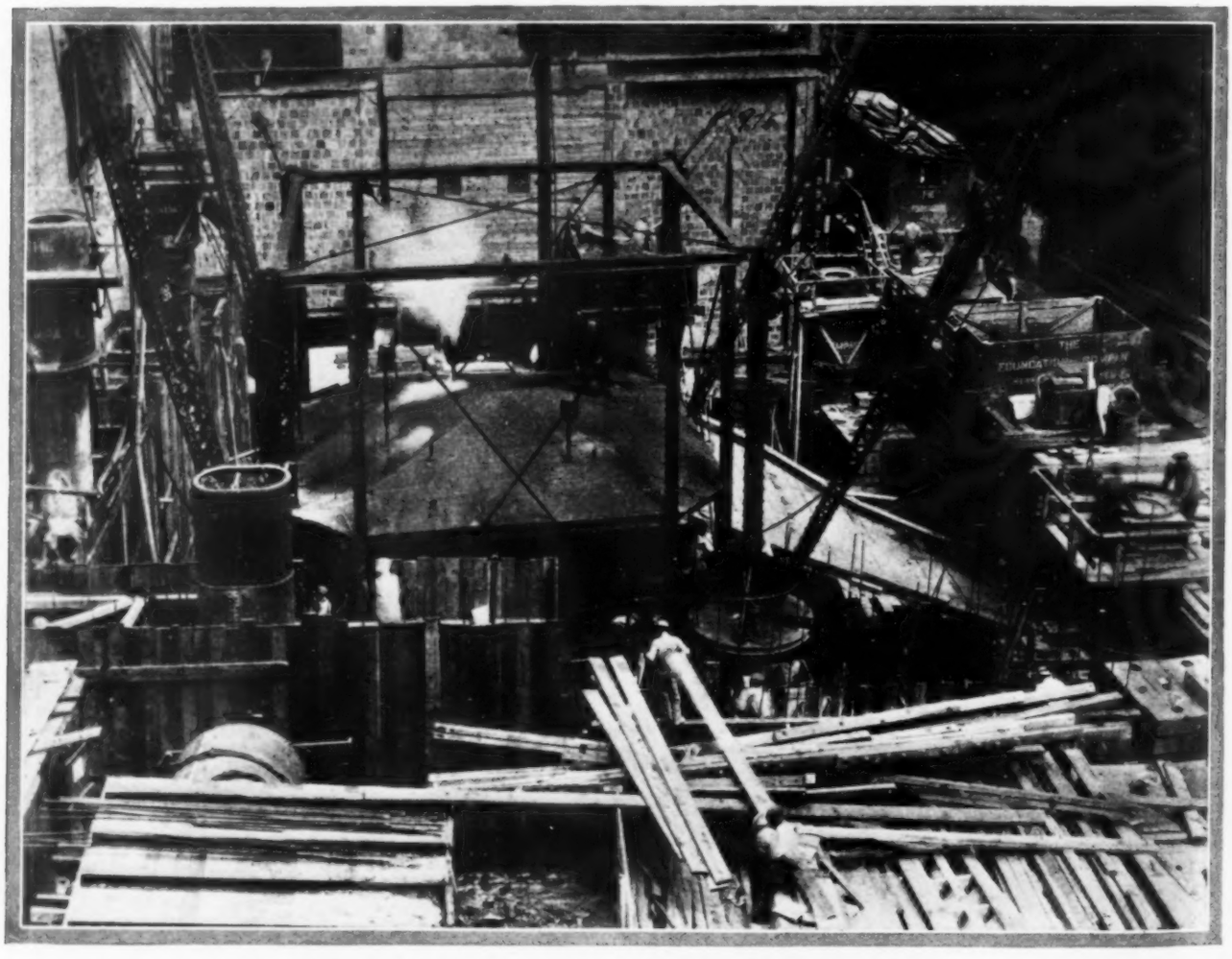
Breaking Boulders in Wall Street

Ticklish Problems Encountered in Sinking Caisson for Foundation of Big Bank Building

THE Bank of America has just moved into its new building in downtown New York, a great structure that is twenty-three stories in height, has a frontage of 70 ft. on Wall Street and runs through to Pine Street. The east side of the building faces William Street and occupies the entire block between Wall and Pine. Like many other New York buildings, the foundations and the erection of the building were handled by different organizations. The Foundation Company had the contract for the excavation and the foundations and the Charles T. Wills Co. put up the building, which is shown in the large photograph on page 30. This photograph was taken the day before this issue of *Successful Methods* went to press, and shows the new building complete with the exception of a few finishing touches.

The other three photographs which accompany this article were taken on the Foundation Company's share of the work. That on this page is a general view of the excavation and gives a good idea of the methods used in carrying on the work. The two photographs on the opposite page show an unusual problem encountered during the course of the job and the way in which it was solved.

One of New York's subways runs through William Street paralleling the east side of the Bank of America building, and in making the excavation it became necessary to remove some concrete underpinning piles that had been driven at the time the subway was built. There was very little room in which to work and these piles had to be removed within the caissons. The method adopted is clearly shown in the upper photograph on the opposite page. The cable ordinarily used in hoisting excavated material out of the caisson was fastened to the piles and they were broken off and pulled out of the caissons. The photograph, which was taken in the caisson, shows the cable fastened around a pile ready to break it off. The cutting edge of the caisson may be seen above the pile. It has been temporarily supported by a block placed on top of another pile.



General View of Excavation for Bank of America Building

Removing old concrete underpinning put in when subway was built. Photograph at right was taken inside caisson. A number of the piles which had to be removed are shown in the lower picture.

Putting the finishing touches on the Bank of America's new building. This photograph was taken from William Street and shows the Wall Street front

Another unusual problem was encountered in the northwest corner of the excavation where a pocket of hardpan interspersed with boulders was found. This pocket proved to be about 15 ft. in depth and some of the boulders were about 5 ft. in diameter. It was necessary to drill and shoot these big fellows inside the caisson in order to get them out. The proximity of this pocket to the building of the Bank of the Manhattan Company on the west made this portion of the work rather delicate, but it was accomplished without a mishap of any sort. Solid concrete now fills the pocket where the boulders were.

Is your Camera worth $25.00 to you?

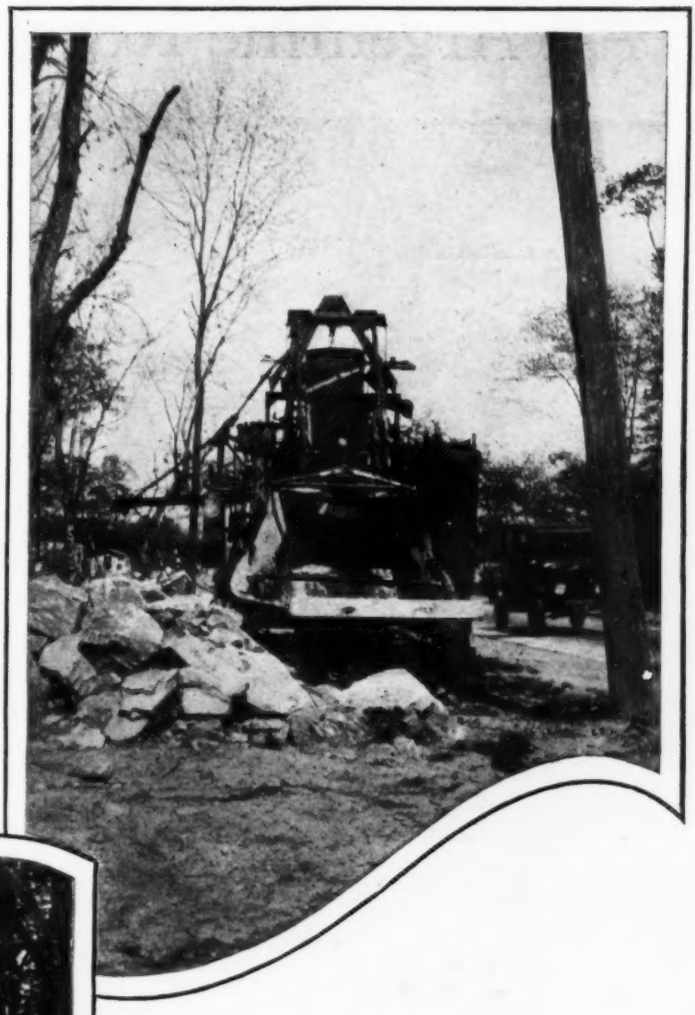
It is, if you can win the

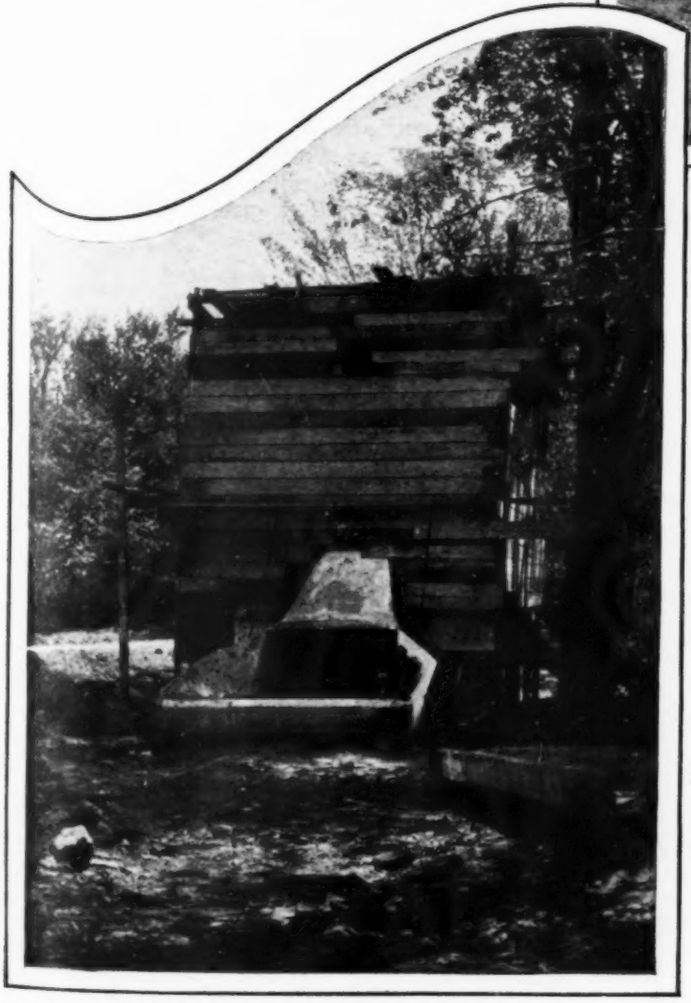
October Photograph Contest

Conditions of Contest on page 15

Care vs. Neglect

THE farmer who leaves his machinery in the field exposed to the weather is not without his disciples in the construction field. Many an expensive machine has been ruined because the contractor who owned it left it on the job without proper protection. The two photographs on this page show paving mixers, both of which represented a considerable investment on the part of their owners.





The machine in the lower photograph is owned by a man who appreciates the value of good equipment. When he had to leave it over the winter on the job, he built a house around it adequately protecting it against the winter storms. The machine in the upper photograph was left beside the road. A few seasons ago it was in good condition but by the time spring came it was in bad shape and never has been used since. It stands as a costly monument to neglect.

An Argentine Road Before and After

ROADS and streets such as that shown above are fast being eliminated in the Argentine Republic. This photograph was taken in one of the outlying sections of Buenos Aires. The picture at the bottom of this page shows a big paver made in the United States and owned by George E. Nolan, Inc., of New York, at work in the same street shown in the upper photograph. Since the paving on this street was finished, a bus line has been put in operation, Ford cars supplying the bus service.

The conditions with which the Argentine public officials have to contend are clearly illustrated by the two photographs on the opposite page. The small photograph shows a bridge as it ordinarily looks and the large picture shows the same bridge spanning the flood after a three-day storm.

Highway building in the Argentine Republic is handicapped by conditions such as those shown in the photographs on this page. The land in the vicinity of Buenos Aires is comparatively level and a stream which is dry most of the year will rise after a storm and become a river like that shown in the photograph below

Our October Photographic Contest is under way

Your photographs must be in this office by Saturday, September 11th, in order to be considered. Mail them early and send as many as you wish. The winner will receive $25.00.

See page 15 for conditions

What's the Difference?

Working a Granite Quarry in Quincy, Mass.

© U. & U.

An Excavation Job in the City of New York

Indiana Builds War Memorial

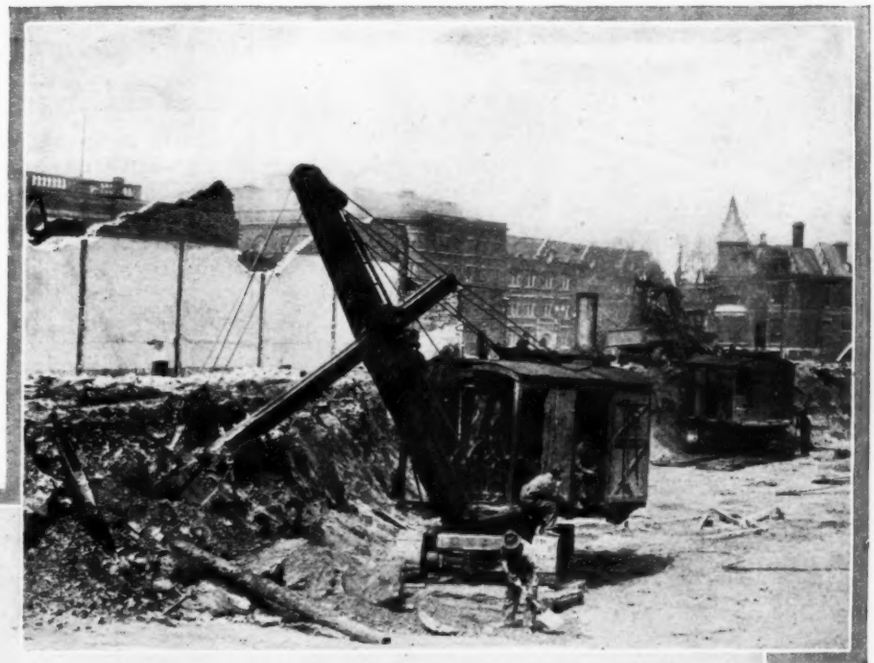
Contractors Pour Main Foundation Pad in 61 Hours

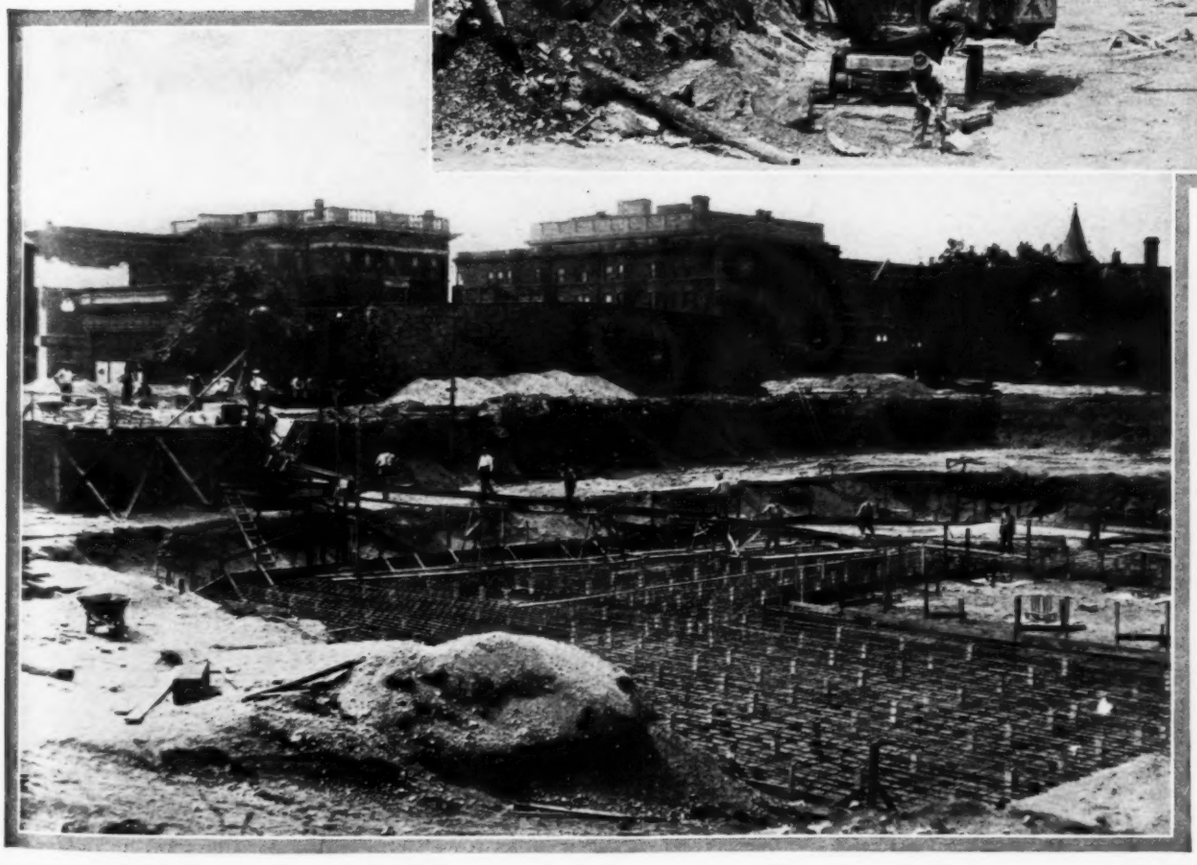
WORK has begun on a memorial building in Indianapolis to commemorate the services of the men from that state in the World War. Excavation and foundations were let as a separate contract to the E. C. Strathman Company of Indianapolis, and work began last March.

An interesting feature of the job was the pouring of the main pad. This pad of concrete is 130 ft. square and 2 ft. thick containing 10,078 cu.yd. of concrete reinforced with 1-in. and ⅞-in. round bars. The pouring was put through as a single operation requiring 61 hr. of continuous work. It began at 10 o'clock in the morning and was finished at 11 o'clock in the evening of the third day. Pouring began at the northwest corner and was finished at the southwest corner. Two Boss mixers were used for the work.

The upper photograph on this page shows the excavation work in progress and two of the three shovels on the job may be seen. The finished excavation is 178 ft. by 327 ft. The lower photograph was taken during the pouring of the pad and shows the arrangement of mixing plant and chuting equipment.

Preparing the foundations for the Indiana War Memorial at Indianapolis. The upper picture shows the shovels digging the excavation, and the lower photograph was taken during the pouring of the main foundation pad. It shows the steel reinforcing bars in place ready for the concrete





New Equipment on the Job

Cleveland's Latest Central Mixing Plant

One of the recent central mixing plants installed by the Erie Steel Construction Company is shown in the accompanying photograph. It is operated by the Cleveland-Trinidad Paving Company of Cleveland, Ohio, and has a capacity of 150 tons.

Adjustable aggremeters are provided for proportioning the sand and stone which is dropped from the bins

directly into the hopper of the 1-yd. mixer. The photograph shows the mixer discharging concrete into small trucks which carry it to every part of Cleveland.

This plant is the fifth furnished by the Erie Steel Construction Company to the Cleveland-Trinidad Paving Company and is operating even more successfully than its four predecessors.

Small Cranes Handle Many Jobs

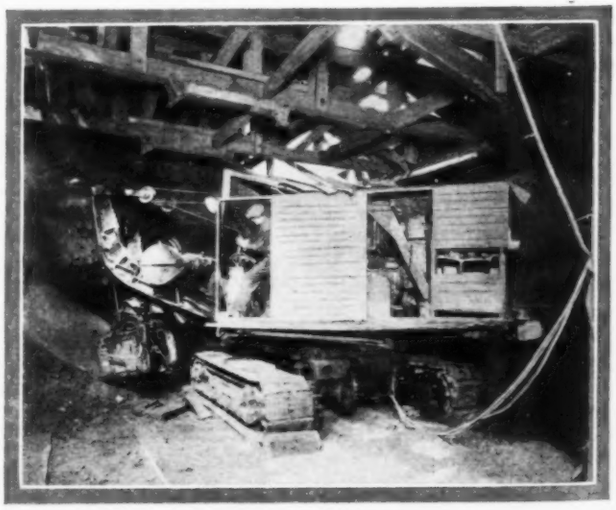
A machine which has been doing excellent work in the construction field is the Tractocrane, manufactured by the Vergan Schmidt Company of Chicago. This machine is illustrated in the accompanying photograph where it is engaged in handling crushed stone with a ½-yd. clamshell bucket.

Tractocranes have recently been put into service in

nearly every section of the country and are handling a great variety of jobs, such as car unloading, excavating, backfilling, handling pipe and machinery, and other work of a similar nature.

Compact Shovels Work in New Subway

One of the latest units turned out by the Marion Steam Shovel Company is shown herewith. This shovel,



which is designed especially for underground work in close quarters, is one of a number that are at present engaged in helping to build New York's Eighth Avenue subway.

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